Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technology	))))	ET Docket No. 92-9

COMMENTS OF THE NORTH AMERICAN TELECOMMUNICATIONS ASSOCIATION

The North American Telecommunications Association ("NATA") hereby submits comments in response to the Commission's Notice of Proposed Rule Making, FCC 92-20, released February 7, 1992.

NATA is a trade association comprising more than 600 manufacturers, suppliers, distributors, and users of business telecommunications equipment. Founded in 1970, NATA exists to promote competitive markets and healthy sales and support channels for users of business and public communications products and services. NATA has actively participated in FCC proceedings affecting customer premises equipment markets and has consistently sought to promote regulatory policies that encourage broad participation by private companies in the telecommunications equipment and services distribution marketplace. With the recent growth of wireless telecommunications markets, NATA's members are in the forefront of efforts to serve the demand for personal communications by developing and marketing wireless PBXs and other wireless office systems and related products and services.

I. AN ALLOCATION OF SPECTRUM DESIGNATED FOR EMERGING TELECOMMUNICATIONS TECHNOLOGIES, INCLUDING WIRELESS OFFICE SYSTEMS, IS URGENTLY NEEDED

NATA strongly concurs in the Commission's finding that the creation of emerging technology bands is necessary and appropriate to encourage the provision of new technologies and services to the public and encourage the larger and more effective use of radio in the public interest. Notice, para. 8. In particular, with respect to wireless office systems NATA can attest that the lack of available spectrum has had, in the Commission's words, "a chilling effect on the incentives for manufacturers and financial institutions to develop and fund new communications research." Id., para. 7. Data gathered by NATA from its members and discussed in NATA's post-en-banc-hearing comments in Docket No. 90-314 indicate that there is intense interest in selling wireless office equipment but that the shortage of authorized spectrum and the resulting inhibitions on manufacturers are the principal obstacles to the emergence of a broad-based market for wireless office systems. Comments of the North American Telecommunications Association Regarding the Issues Addressed in the En Banc Hearing, Gen. Dkt. No. 90-314 at 1-2 (January 15, 1992)("NATA 90-314 Post-Hearing Comments").

The potential benefits of wireless systems in an office setting are very significant -- reduced wiring costs, reduced frequency of unanswered calls with resulting network and other efficiencies, and greater flexibility for employees to use a fully

featured business telephone while "roaming" around an office or industrial campus.

The market for wireless office systems will develop over time once a stable spectrum authorization has been established. Not all businesses initially would be interested in immediately purchasing wireless business telephones or related equipment, and those that do generally are not expected, in the beginning, to completely replace their wired systems with wireless systems. Rather, the "early adopters" of wireless office technology are expected to add on a number of wireless handsets to their existing systems.

One recent study, conducted by EMCI Inc. based on a survey of business telecommunications users, has estimated the short-term (to 1995-96) market potential in the United States for wireless office telephone sets to be about 2.3 million. See J. Tarlin, "A Win-Win Situation: the Wireless Office in the U.S. and Europe," Telephony, May 4, 1992, at 31-34. This estimate compares favorably with the market penetration achieved by the cellular industry at a comparable stage -- about 1.2 million users in 1987, four years after initiation of service.

EMCI notes, moreover, that its estimate of wireless office system market penetration is conservative, and may understate even the short-term market potential because of the relative lack of current awareness of wireless office telephone products on the part of U.S. users. EMCI's parallel study of the potential market in Europe, where there is greater awareness of wireless office telephony, found a much higher level of interest and potential

market demand. Id. It is not unreasonable to assume that, with greater consumer awareness, the U.S. market for wireless office telephone products would quickly reach more than 10 million stations.

The long-term demand for wireless office systems is more difficult to predict, but is likely to be even higher. As an indication of the possible long-term market for wireless business systems, the current installed base of multiline business telephone systems (PBX, key, centrex) is estimated to be more than 60 million telephones.

However, the potential market will not be uncovered, and the productivity and efficiency gains from wireless office systems will not be realized, unless the Commission provides a more reliable frequency allocation than the existing cordless telephone frequencies and other "secondary use" frequencies available for unlicensed use under Part 15 of the FCC rules. See NATA 90-314 Post-Hearing Comments at 4.

II. THE COMMISSION SHOULD DESIGNATE FREQUENCY BANDS IN THE 2 GHZ RANGE FOR EMERGING TECHNOLOGIES INCLUDING WIRELESS OFFICE SYSTEMS

NATA welcomes and supports the Commission's proposal to designate frequency bands between 1.85 and 2.20 GHz for the use of emerging telecommunications technologies, including personal communications service (PCS) applications such as wireless PBXs and other wireless office systems.

The Commission's study, Creating New Technology Bands for Emerging Telecommunications Technology (Office of Engineering and Technology, OET/TS 92-1, January 1992), presents sound and persuasive reasons, based on objective evidence, that the 1.85-2.20 GHz band is the best candidate location for the emerging technologies bands. Based on considerations such as (1) amount of available contiguous spectrum, (2) the propagation characteristics of the band, (3) relative impact on existing licensees and ease of any necessary relocation, and (4) availability of relatively low-cost radio equipment, it is clearly reasonable for the FCC to designate this band and, in particular, the segments of spectrum within this band that are proposed for designation as emerging technologies bands.

In the separate statement of Commissioner Barrett regarding this Notice, commenter are invited to address the adequacy of the spectrum band proposed in this Notice with respect to the spectrum needs of emerging technologies. It is always difficult to predict with precision in advance the amount of spectrum needed by any new service. However, ROLM's estimate of 40 MHz is a good approximation based on sound analysis and reasonable assumptions. See ROLM Comments, dated May 28, 1992, Attachment 1.

Although it may be desirable to have contiguous spectrum allocations for wireless office systems, high-speed data systems and personal communications services, NATA believes that each of these services should have its own spectrum allocation because of the different technical requirements involved with each.

For the reasons stated in its Post-Hearing Comments, NATA also believes it is very important for the Commission to encourage a diversity of suppliers and avoid subjecting users of wireless office systems to cumbersome administrative procedures. Therefore, the Commission should not impose a highly restrictive licensing scheme on wireless office systems.

These details are most appropriately worked out in the Commission's Docket No. 90-314 proceedings on personal communications services.

III. THE TRANSITION PLAN PROPOSED BY THE COMMISSION PROVIDES GENEROUS ACCOMMODATION FOR EXISTING LICENSEES

The Commission's plan for accommodating the needs of existing licensees makes generous allowance for the legitimate needs of such licensees to ensure that communications services benefitting the public will not be harmed and that the current use of frequencies by such licensees will not be needlessly displaced. A transition period such as that proposed by the Commission is an appropriate means of addressing these concerns of existing licensees.

In regard to existing licensees, NATA notes that wireless office systems are likely to have only a limited impact on such licensees, at least in the early stages of market development. First, wireless office systems initially will tend to be concentrated in metropolitan areas. In metropolitan areas, with certain exceptions, there is generally an abundance of unlicensed spectrum at 1850 MHz. Second, most wireless office systems will be used primarily or entirely within buildings, where there is

significant attenuation of signal strength transmitted outside. Third, wireless office systems generally will require very low power levels. Finally, it is likely that wireless office systems will be able to employ dynamic channel allocation techniques that will further limit any risk of interference with existing licensees. Thus, a transition period will allow the wireless office systems market to develop without requiring wholesale displacement of existing licensees.

One aspect of the Commission's proposed transition plan involves negotiations between the users of emerging technologies and existing licensees for reimbursement of costs of any necessary relocation. NATA supports the development of mechanisms for reasonable reimbursement of existing licensees. However, with respect to spectrum made available for wireless office systems, such a mechanism must be implemented in a way that allows for open entry by a diversity of suppliers and user flexibility to deploy office systems without facing restrictive administrative procedures. NATA 90-314 Post-Hearing Comments at 5-7. Therefore, to the extent that the Commission relies on negotiated settlements to accomplish any necessary relocation of existing licensees, it may be appropriate for the Commission to consider the need for an umbrella organization or mechanism that could effectively fund and carry out any necessary relocation negotiations on behalf of future users of wireless office systems.

IV. THE CRITERIA FOR ALLOWING USE OF EMERGING TECHNOLOGIES FREQUENCIES SHOULD BE CAPABLE OF BEING APPLIED TO A CLASS OF PRODUCTS OR SERVICES

The Commission seeks proposals and comment on "the criteria to be applied in determining whether a new service or expansion of an existing service merits frequencies from the emerging technologies bands." Notice, para. 28. The Commission states:

> Generally, we are of the view that, at a minimum, requests for operation of new services in these bands should demonstrate that the service makes innovative use of a new technology and that the technology is most appropriately suited to operate in the 2GHz region. Similarly, requests for expansion of existing servcies should demonstrate that the expansion would offer some substantial improvement in either quality of service or spectrum efficiency.

Id. The Commission adds that it anticipates the first use of the emerging technologies bands will be for PCS.

NATA agrees with the Commission's general views on the criteria to be applied. However, the Commission should be prepared to apply these criteria on a generic basis in appropriate cases. In the case of wireless office systems, for example, the Commission should determine that such a class of products and/or services, appropriately defined, holds great promise for the application of new technologies to benefit the public, and should adopt general rules authorizing that class of operations, without requiring additional individualized showings for each wireless office product or technology that is developed. Such a generic approach to authorizing spectrum for wireless office systems is essential, in NATA's view, in order to release the innovative energies of manufacturers of wireless premises equipment and to avoid

unnecessarily constraining the development of diverse equipment that can be readily marketed to end users.

CONCLUSION

The Commission should adopt rules designating the identified frequency bands between 1.85 and 2.20 GHz for the use of emerging telecommunications technologies, including wireless office systems.

Respectfully Submitted,

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June 5, 1992